



BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

COMMENTS AND RECOMMENDATIONS OF THE MINNESOTA DEPARTMENT OF COMMERCE ENERGY FACILITY PERMITTING STAFF

DOCKET NO. E-015/WS-07-676

Meeting Date: June 14, 2007.....Agenda Item # ____6____

Company: Minnesota Power

Docket No. **PUC Docket Number: E-015/WS-07-676**
In the Matter of a Site Permit Application for the 25 MW Taconite Ridge I
Wind Energy Center in the St. Louis County, Minnesota.

Issue(s): Should the Commission accept the site permit application and authorize
distribution of a draft site permit for public comment?

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Relevant Documents (in Commission Packet)

Application of Minnesota Power.....May 29, 2007

The enclosed materials are the work papers of the Department of Commerce Energy Facility Permitting Staff. They are intended for use by the Public Utilities Commission and are based on information already in the record unless otherwise noted.

This document can be made available in alternative formats, i.e., large print or audio tape by calling (651) 201-2202 (Voice) or 1-800-627-3529 (TTY relay service).

Documents Attached

1. Proposed Draft Site Permit

(Note: Relevant documents and additional information can be found on eDockets (07-676) or on the PUC website at:

<http://energyfacilities.puc.state.mn.us/Docket.html?Id=19151>)

Statement of the Issues

- A. Should the Public Utilities Commission (the PUC or Commission) accept the Minnesota Power (MP) application for a Large Wind Energy Conversion System (LWECS) site permit as complete?

If the application is accepted, should the PUC:

- B. Appoint a public advisor?
- C. Make a preliminary determination on whether a site permit may be issued or denied and authorize a draft site permit?

Introduction and Background

Minnesota Power (MP) has submitted the site permit application for the 25 MW Taconite Ridge I Wind Energy Center in St. Louis County.

The Applicant and Project Ownership

MP, an investor-owned utility based in Minnesota, will own the Project including all equipment up to the connection MP's Minntac Substation. MP is exploring the feasibility of the Mountain Iron Economic Development Authority owning a minority share of the project thereby meeting the requirements of a Community-Based Energy Development (C-BED) project under the Minn. Stat. 216B.1612, but at the time of application Minnesota Power is the sole owner.

Taconite Ridge I Wind Energy Center is MP's first LWECS and the first commercial wind facility in northeastern Minnesota. MP will use the entire output of the Project to serve its customer energy needs and meet its renewable energy requirements.

Project Location

The Project is located approximately 58 miles northwest of Lake Superior and near the city of Mountain Iron, in portions of Sections 23 through 27 in the unorganized portion of Township 59 North and Range 18 West in St. Louis County. The Project Site is approximately 475 acres located within US Steel's Minntac Mine facility. MP has a long-term lease for the Project Site. The Project Site is bounded by undeveloped land owned by US Steel to the north and east, the Minntac plant is located to the west, and Minntac Mine active operations are located to the northwest and south. The Superior National Forest is located north of the Project Site, beyond the land owned by US Steel and consists of vegetated areas of predominately native forest communities.

The Project is located on a ridge known as the Laurentian Divide within the Mesabi Iron Range which is a large deposit of iron ore and other minerals. The center of the Project Site is made up of an east to west ridge with elevations ranging 1,600 to 1,850 feet above mean sea level. Most of the Project Site is undeveloped deciduous forest with some cleared areas. There is a 22 kilovolt (kV) electrical distribution line that traverses from north to south through the western section of the Project Site. Just south of the Project Site, MP owns two 115 kV transmission lines which connect to its Minntac Substation just southwest of the Project Site.

Taconite Ridge I Wind Energy Center Project Description

The Applicants propose to install ten 2.5 MW Clipper Liberty turbines. The turbines will have a hub height of approximately 265 feet (80M). The rotor diameter of the turbines will be approximately 305 – 315 feet. The maximum overall height of the wind turbines, with a turbine blade fully extended, is between approximately 417 and 423 feet above grade. The swept area will be between 73,084 and 77,897 square feet.

The rotor consists of three blades mounted to a rotor hub. The hub is attached to the nacelle, which houses the gearbox, generator, brake, cooling system, and other electrical and mechanical systems. The rotor has a variable speed of 9.6 to 15.5 revolutions per minute, resulting in blade tip speeds between 150 to 190 miles per hour.

The electrical collector system will consist of underground 34.5 kV collection lines, an underground or overhead 34.5 kV connection to MP's Minntac Substation, and a step-up 34.5/115 kV transformer to deliver the power into the grid.

Other project components include: all-weather class 5 access roads of gravel or similar materials, pad-mounted step-up transformers, concrete and steel tower foundations, a supervisory control and data acquisition system, meteorological towers, and an operations and maintenance building.

MP anticipates an in-service date in the spring of 2008.

Regulatory Process and Procedures

A Certificate of Need from the PUC is not required because the project does not exceed the Certificate of Need project size threshold. However, MP will petition the PUC for cost recovery under its Renewable Resources Rider as allowed by 216B.1645.

A site permit from the PUC is required to construct a LWECS, which is any combination of wind turbines and associated facilities with the capacity to generate five megawatts or more of electricity. This requirement became law in 1995. The Minnesota Wind Siting Act is found at Minnesota Statutes Chapter 216F. The rules to implement the permitting requirement for LWECS are in Minnesota Rules Chapter 4401.

Application Acceptance

Minnesota Rule 4401.0460 states that: "Within 30 days after receipt of an application for a site permit, the PUC shall accept, conditionally accept, or reject the application." On May 29, 2007, MP filed a LWECS Site Permit Application with the PUC. The required contents of a site permit application are specified in Minnesota Rule 4401.0450.

Public Advisor

Minnesota Rule 4401.0470 states: “Upon acceptance of an application for a site permit, the PUC shall designate a staff person to act as the public advisor on the project.” The Commission can authorize the Department to name a staff member from the EFP staff as the public advisor or assign a PUC staff member.

Preliminary Determination

Minnesota Rule 4401.0500 Subpart 1. states that: “Within 45 days after acceptance of the application by the PUC, the PUC shall make a preliminary determination whether a permit may be issued or should be denied. If the preliminary determination is to issue a permit, the PUC shall prepare a draft site permit for the project. The draft site permit must identify the permittee, the proposed LWECS, and proposed permit conditions.”

Issuing a draft site permit does not authorize a person to construct an LWECS. The PUC may change, amend or modify the draft site permit in any respect before final issuance or may deny the site permit at a later date. Department of Commerce (DOC) Energy Facilities Permitting (EFP) staff will bring this matter back to the Commission for final action upon the conclusion of the public participation process.

DOC EFP Staff Analysis and Comments

The Taconite Ridge I Wind Energy Center site permit application has been reviewed by DOC EFP staff pursuant to the requirements of Minnesota Rules Chapter 4401 (Wind Siting Rules). The application provides all of the information required by Minnesota Rule 4401.0450. Acceptance of the application will allow staff to initiate the public review and participation process of Chapter 4401.

EFP staff used the information in the application and experience with other LWECS projects as a guide for evaluating whether a permit may be issued for the project or should be denied, pursuant to Minnesota Rules 4401 0500 Subpart 1. EFP staff finds that the available information is sufficient to conclude that it is appropriate to make a preliminary determination that a site permit may be issued for the project.

As currently proposed, the turbine layout does not meet the perimeter setbacks of 5 rotor diameters north-south and 3 rotor-diameters east-west that have been maintained by other LWECS. There are several factors unique to this project that may justify a smaller perimeter setback than typically used: the project is developed in one relatively small portion of a larger contiguous land parcel, all of which is owned by US Steel; there are mining facilities to the south and west of the Project site that make wind development of adjacent lands unlikely; the location of the Project on a ridge with relatively steep elevation drops in all directions limits the attractiveness of immediately surrounding areas for wind development. EFP staff will continue to work with the applicant and the public to identify the best alternative for addressing this issue and anticipates that the issue will come before the Commission again with the final permit. The applicant has agreed to provide additional information as requested by EFP staff.

EFP staff has prepared a draft permit identifying the permittee, the proposed LWECS, and proposed permit conditions. The proposed draft site permit is attached to these Comments and Recommendations. Commission approval of the draft site permit will allow for distribution of the draft site permit, initiation of the public review process and formal public comment period.

Commission Decision Options

A. Application Acceptance

1. Accept the Minnesota Power Site Permit Application for the Taconite Ridge I Wind Energy Center 25 MW LWECS.
2. Reject the Application as incomplete and issue an order indicating the specific deficiencies to be remedied before the Application can be accepted.
3. Find the Application complete upon the submission of supplementary information.
4. Make another decision deemed more appropriate.

B. Public Advisor

1. Authorize the Minnesota Department of Commerce Energy Facilities Permitting staff to name a public advisor for this project.
2. Appoint a PUC staff person as public advisor.
3. Make another decision deemed more appropriate.

C. Preliminary Determination and Authorization of a Draft Site Permit

1. Make a preliminary determination that a draft site permit may be issued, and approve the attached proposed draft site permit for the Minnesota Power Taconite Ridge I Wind Energy Center for distribution and public comment. Authorize EFP staff to initiate the public participation process found in Minnesota Rules 4401.0550.
2. Make a preliminary determination that a draft site permit may be issued, and amend or modify the attached proposed draft site permit for the Minnesota Power Taconite Ridge I Wind Energy Center for distribution and public comment. Authorize EFP staff to initiate the public participation process found in Minnesota Rules 4401.0550.
3. Make a preliminary determination that a draft site permit should be denied.
4. Make some other decision deemed more appropriate.

DOC EFP Staff Recommendation: Staff recommends option A1, B1, and C1.